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Application No. 10/511,023
Filed: October 8, 2004
TC Art Unit: 3736
Confirmation No.: 8760

REMARKS

Claims 1-70 are pending. Claims 1-70 stand rejected under 35 U.S.C. 112, second paragraph. Furthermore, claims 1-4, 14-19, 21-37, 39-41, 46, 47, 49-66, and 68-70 stand rejected under 35 U.S.C. §102(b) and claims 5-13, 20, 38, 42-45, and 48, and 67 stand rejected under 35 U.S.C. §103(a). Claims 1-4, 14, 17, 36-39, 46, 58, and 66-70 have been amended. No new matter has been added.

The Applicants thank Examiner Smith for granting a telephone interview on December 13, 2006, the substance of which appears herein

FORMALITIES

The Applicants respectfully request withdrawal of the finality of the Office Action. The Examiner has rejected claims 1-4, 14-19, 21-37, 39-41, 46, 47, 49-66, and 68-70 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Number 6,063,046 to Allum. The Applicants believe that the finality of the Office Action is inappropriate. The claims were previously amended in response to rejections based on U.S. Patent Number 6,174,294 to Crabb, et al., which has since been withdrawn. This is the first instance that the Allum reference has been cited against the invention as claimed.

The MPEP provides that:

A second or subsequent action on the merits in any application or patent undergoing reexamination proceedings should not be made final if it includes a rejection, on prior art not of record, of any claims amended to include limitations which should reasonably have been expected to be claimed.

-16-

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MPEP, §706.07(a) (Emphasis added).

As provided above, the present rejections made final are based on the Allum reference, which is newly cited in the Final Office Action. Independent claims 1 and 39 were previously amended in response to the Examiner's initial Office Action. For the following reasons, the limitations added to the original claims "should reasonably have been expected to be claimed," making the finality of the rejection premature.

In our response to the initial Office Action, the original claim 1 term "configured for placement under at least one foot of a user" was amended to read -- configured for wearing by placement under at least one foot of a user -- which should reasonably have been expected based on the subject matter of dependent claims 5-10, which is drawn to sensors being mounted or inserted into wearable footgear.

The original claim 1 term "at least one stimulator responsive to said at least one stimulation control signal for stimulating said user" was amended to read -- at least one stimulator attachable to a body surface part of said user, responsive to said at least one stimulation control signal for stimulating said body part of the user -- which should reasonably have been expected based on the subject matter of dependent claims 19-24, which is drawn to incorporating, implanting, and placing the stimulator(s) on or near a body surface part.

Accordingly, withdrawal of the finality of the present Office Action is respectfully requested.

Application No. 10/511,023
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SECTION 112, SECOND PARAGRAPH REJECTIONS

Claims 1-70 have been rejected as indefinite under 35 U.S.C. §112, second paragraph. The Examiner has also raised several objections to claims 1, 17, and 66. Claims 1-4, 14, 17, 36-39, 46, 58, and 66-70 have been amended. Accordingly, the Applicants believe that the grounds for rejection are moot and the claims are in condition for allowance.

SECTION 102(b) REJECTIONS

Claims 1-4, 14-19, 21-37, 39-41, 46, 47, 49-66, and 68-70 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent Number 6,063,046 to Allum. The Applicants respectfully traverse the grounds for rejection in view of the above amendments and for the following reasons.

Independent claims 1 and 39 have been amended to recite "a plurality of sensors for detecting balance information during standing and gait, wherein said plurality of sensors is configured for wearing by placement under at least one foot of a user." Allum, however, does not teach, mention or suggest a system for assisting the maintenance of balance that provides balance information while the subject is gaiting. Moreover, Allum does not teach, mention or suggest that the sensors are "configured for wearing by placement under at least one foot of a user". The Examiner appeared to recognize this distinction during the telephone interview.

On the contrary, in Figs. 2 and 3, Allum shows a support platform (26) that is controllable to be pitched and rolled to

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diagnose whether or not the subject has any abnormalities with his/her balance correction. See, e.g., Allum, col. 9, lines 45-49. The support platform is not "configured for wearing" as required by the claim nor are the "sensors placed under at least one foot". Indeed, the transducers 50 and 54 are disposed at the pitch and roll points. Accordingly, the Applicants respectfully assert that the claims 1 and 39 and all claims depending therefrom are not anticipated by Allum.

Independent claims 1 and 39 further recite that the at least one stimulator is "attachable to a body surface part of said user" and, furthermore, that the stimulator is for "stimulating said body surface part", which (per claims 31 and 63) can be a leg.

Allum, however, teaches providing "varying electrical signals" to "stimulate the vestibular nerve" in the ear canal. See, e.g., Id., col. 26, lines 57-58. The vestibular nerve, however, is not a "body surface part" as required by the claims. Accordingly, the Applicants respectfully assert that the claims 1 and 39 and all claims depending therefrom are not anticipated by Allum and are in condition for allowance.

SECTION 103(a) REJECTIONS

Claims 5-10, 20, 42-45, and 48 stand rejected under 35 U.S.C. 103(a) as unpatentable over Allum in view of U.S. Patent Number 6,174,294 to Crabb, et al.; claims 11-13 stand rejected under 35 U.S.C. 103(a) as unpatentable over Allum in view of U.S. Patent Application Publication Number 2002/0055779 to Andrews; and claims 38 and 67 stand rejected under 35 U.S.C. 103(a) as unpatentable

Application No. 10/511,023
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over Allum in view of U.S. Patent Number 4,745,930 to Confer. The Applicants respectfully traverse these rejections based on the above amendments and for the reasons provided above and below.

The shortcomings of the Allum reference have been discussed above. Nor can any of the Crabb, Andrews or Confer references make up for the deficiencies of the Allum reference.

As provided in our previous response, Crabb lacks the stimulation function and, more specifically, the body surface part stimulation of the invention as claimed.

Also, as provided in our previous response, Andrews provides a system to block neural activities, an "electrical nerve block for clinical use" such as to reduce spacticity and the like. Since Applicants' electrical signals are applied as a stimulus, the teaching of Andrews is completely opposite. Furthermore, Andrews would not be looked to by those skilled in the art for suggestions for use in a system operating to achieve a completely opposite goal. Andrews fails to disclose a skin inserted stimulating signal.

Confer teaches a sensor system and not a combined sensor and stimulator system so adds nothing beyond Allum. Thus one skilled in the art would not look to Confer for suggestions on a stimulator system for maintaining balance. More particularly claims 37 and 38 do not require the stimulation be at least in part a function of ankle angle. This is nowhere taught or suggested in Confer or Allum.

Accordingly, the Applicants respectfully assert that claims 5-13, 20, 38, 42-45, and 48, and 67 are not obvious and unpatentable over Allum in view of Crabb, Andrews and/or Confer and are in condition for allowance.

-20-

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Application No. 10/511,023

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TC Art Unit: 3736


Confirmation No.: 8760

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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-21-

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